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2d Probe Views New Data

NIH's Baltimore Inquiry Near Completion of Report

The long-running Baltimore case—perhaps the most rancorous of recent scientific-misconduct inquiries—has entered the final stage, with a draft report from an investigative panel expected "within a matter of weeks," according to the Office of Scientific Integrity (OSI) at the National Institutes of Health.

OSI's stated goal is to complete the final report by the end of the summer. If public signs of where the inquiry is headed foreshadow the official outcome, shame and much explaining lie ahead for some of the most prominent figures in the biomedical sciences. In allegations of coverups, stonewalling, and evasion, the case is without parallel in relations between science and government. Not out of the question, as disclosed at a recent Congressional hearing, is the possibility of criminal charges [SGR, May 15: "Secret Service Says Data Faked in Baltimore Case"].

At issue is a paper published in *Cell* in 1986, widely hailed as of high scientific importance, but disputed as unsupported and fraudulent by a postdoctoral fellow working in the laboratory of one of the co-authors, Thereza Imanishi-Kari, of Tufts University. The portion of the paper contributed by her collaborator, Nobelist David Baltimore, the recently installed President of Rockefeller University, has never been in dispute. But from the beginning of a public controversy now in its third year, Baltimore has conspicuously defended the paper—and being the best-known of the authors, his name has become attached to the case.

The NIH investigative panel, comprising five non-government researchers, was constituted last year to renew an inquiry that was closed in 1988 and then reopened. The revival took place after the then-Director of NIH, James B. Wyngaarden, was informed of new information that he described as "extremely disturbing." The information was to the effect that the original investigating panel had been misled by data fabricated by Imanishi-Kari.

The new panel met in private June 20 at NIH with members of the OSI. Not present, though "we are eager to hear from her," an OSI official told SGR, was Imanishi-Kari. But if Imanishi-Kari is the central figure in the inquiry, the impresario of the affair is recognized to be David Baltimore, who has robustly defended the paper while depicting Congressional involvement in the case as a McCarthyite assault on science. In the course of his campaign, Baltimore has written several articles for popular publications and, in a mass mailing last year, fruitfully urged colleagues throughout the country to write to local papers to protest the

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Senate Rule Proposed

A Cold Reception for Curbs On Academic Pork Barrel

With another big year shaping up for pork-barrel raids on federal research funds, the science establishment is seeking adoption of a Senate rule that would heighten the barriers against further hauls. But, alas, the Chairman of the Senate Rules and Administration Committee, Wendell H. Ford, is from Kentucky, which is close to the bottom of the national heap in receipt of federal R&D funds—$62 million in 1987,

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In Brief

Inquiries about the management of the competitive grants system at the National Science Foundation have been received from the Soviet Union, Poland, Hungary, and Czechoslovakia, NSF Director Erich Bloch told a Congressional hearing last month. Bloch said the interest in NSF's ways of funding research reflected dissatisfaction with those countries' traditional method of setting up labs and funding them forever.

A great deal of interpretive power is being applied to the elimination of White House Science Adviser D. Allan Bromley's office in the West Wing of the White House, a spot he held for just a few months as a supplement to his suite in the Old Executive Office Building next door. Staff sources tell SGR that move was initiated by Presidential Counsel C. Boyden Gray, who insisted that officials subject to Senate confirmation should not be based in the Presidential inner sanctum. Bromley used the West Wing office for quiet working space. Its loss is not rued by his staffers, who said the tight security there is a nuisance.

Also at the White House Science Office: James B. Wyngaarden, Associate Director for Life Sciences, departs July 2 to become Foreign Secretary of the National Academy of Sciences. A replacement requires Presidential nomination and Senate confirmation. Filling in on an acting basis will be J. Thomas Ratchford, who is also serving as Associate Director for Policy and International Affairs.

Which brings up the narrowing window for Senate confirmation of senior sci/tech nominations. The big one, the Directorship of the National Institutes of Health, will reach the one-year vacancy mark in August, with no appointment in sight. One leading prospect, Leon Rosenberg, Yale Dean of Medicine, has dropped out. NSF's top job becomes vacant next month. With Congress bogged down in budget squabbles, elections coming on, and an adjournment set for October, it will be hard to squeeze in confirmations.

. . . Evidence "Over and Above" Secret Service Data

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Congressional inquiries.

Some say Baltimore has arranged payment of the legal counsel that regularly accompanies Imanishi-Kari to public proceedings, such as a press conference she staged in Washington in May. Invoking lawyer-client confidentiality, her attorney refused to discuss the matter, nor would Imanishi-Kari say who's paying the legal bills.

Besides shunning the NIH investigators, Imanishi-Kari also declined to testify at a hearing held May 14 by the object of Baltimore's ire, Rep. John Dingell (D-Mich.), Chairman of the Energy and Commerce Subcommittee on Oversight and Investigations, who has long been investigating the case. In response to Dingell's invitation, as with the investigators at NIH, Imanishi-Kari's attorney set a series of conditions that were considered unacceptable by those seeking her testimony.

NIH Grant Revoked

At Dingell's hearing in May, the Deputy Director of the Office of Scientific Integrity, Suzanne Hadley, confirmed that NIH had earlier this year revoked a grant awarded to Imanishi-Kari, "Because the evidence that was developing in the investigation," Hadley said, "raised significant questions about her fitness to hold a PHS [Public Health Service] research grant."

Under questioning by Rep. Ron Wyden (D-Ore.), Hadley acknowledged that her office had written a letter to Imanishi-Kari's attorney stating that "The situation is one in which there is a mounting body of evidence that suggests there may be very serious problems with the authenticity and key sets and data associated with" the disputed *Cell* paper. The letter added, "Against this body of evidence, we have had no communication whatsoever with Dr. Imanishi-Kari"—despite, Hadley testified, repeated attempts to meet with her.

Referring to Secret Service analyses that cast doubt on the authenticity of the laboratory notes that Imanishi-Kari offered in support of her experimental claims, Wyden asked whether "the mounting evidence" "is over and above the evidence gathered by the Secret Service and the subcommittee?"

Hadley responded: "That is correct." The matter was not pursued, but SGR has learned that the evidence "over and above" the Secret Service findings includes a grant-renewal application, recently retrieved at NIH, that Imanishi-Kari submitted in 1985. The data in that application have been compared to subpoenaed lab notebooks that Imanishi-Kari says authenticate her segment of the *Cell* paper. The outcome of that comparison is said to be illuminating.

Dingell asked Hadley whether "falsification of records falls into the category of grounds for termination of grants?"

Hadley: Absolutely, yes.

Dingell: Can you rule that out here?

Hadley: I cannot, Mr. Dingell.

Dingell: Was that included in the basis upon which the grant in question was terminated?

Hadley: That particularly was not included, but it was not ruled out, either.

Science *Ignores Revocation of Grant*

The termination of an NIH grant, on "fitness" or other grounds, is an extraordinarily rare event, surely of interest to the biomedical community. But *Science* magazine, which has toadied after the Baltimore camp throughout the controversy, omitted any mention of Imanishi-Kari's grant termination in a full-page news-section article, May 18, mainly devoted to denigrating the Dingell inquiry as "*deja vu* all over again"—which indeed it was not. The wonder of it is that the Board of the American Association for the Advancement of Science, publisher of *Science*, tolerates such disregard for the credibility of the AAAS's most valuable property.

Also simmering in the Baltimore case is official interest in the sworn Congressional testimony of a strong supporter of Imanishi-Kari, Professor Henry H. Wortis, Director of the Tufts University Graduate Program in Immunology. In April 1988, he said at Dingell's hearing that "the central conclusions [of the disputed paper] have been confirmed. Those have not yet been submitted for publication, however"—thus offering a powerful argument in behalf of the validity of Imanishi-Kari's research.

Dingell wrote to Wortis on January 23, 1990, asking him to "identify the scientist in whose laboratory the repetition about which you testified took place." A response from Wortis's attorney said Dingell's letter "incorrectly characterizes" Wortis's testimony, noting that elsewhere in his testimony—which often rambled—he also said, "I think there is one central conclusion that has not yet been independently tested by any other lab that I am aware of."

In response to an inquiry from SGR, Wortis last week cited two separate papers in the May 1990 *European Journal*

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. . . Two Members Added to Original Inquiry Panel

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of Immunology (by Grundien, et al. and Forni) as the papers he referred to in his Congressional testimony. But he acknowledged that neither deals with what is generally considered "*the* central point" of the disputed Baltimore paper, idiotypic expression by host genes following the introduction of foreign genes into transgenic mice. Wortis told SGR that idiotypic expression was merely "*a* central point."

Behind the marathon case is a dispute that arose in 1986 when a post-doctoral fellow in Imanishi-Kari's laboratory, Margot O'Toole, raised questions about the validity of Imanishi-Kari's contribution to the *Cell* paper. Because of its startling claim that host genes in transgenic mice expressed characteristics of foreign genes, the paper aroused a great deal of scientific interest. Postdoc O'Toole's assertion that it was unsupported by the experimental evidence was dismissed as without substance by inquiries at MIT and Tufts, the latter conducted by Wortis, who was her thesis adviser.

O'Toole eventually was put in touch with Ned Feder and Walter Stewart, NIH staff researchers who, on their own, had shifted their professional attention to issues of scientific integrity. With the NIH pair fanning the flames, and interest being shown by the staff of Chairman Dingell, whose Committee holds authorizing jurisdiction over NIH, Bethesda prepared to convene a formal inquiry—with two Baltimore colleagues selected to serve on a three-member panel. When the easily explosive Dingell exploded with outrage in April 1988 at a hearing on the makeup of the planned NIH inquiry, NIH sought other recruits. In the end, the panel consisted of Joseph M. Davie, Searle Pharmaceuticals; Hugh McDevitt, Stanford University, and Ursula Storb, University of Chicago.

Errors But No Fraud, Panel Reported

In a report completed at the end of 1988, the three concluded that the *Cell* paper contained "serious errors of misstatement and omission, as well as lapses in scientific judgment and interlaboratory communication." They added that "no evidence of fraud, conscious misrepresentation, or manipulation of data was found." The panel recommended publication of several corrections, but no action beyond that. NIH Director Wyngaarden chastised Baltimore and company for what he described as their failure to pay prompt attention to O'Toole's allegations—a charge they disputed, as they did virtually all others. But the NIH head accepted the report, and, normally, that would have terminated the case. O'Toole persevered, however, contending that Imanishi-Kari had fabricated laboratory data to throw the NIH investigators off the track. She took her evidence to Dingell, who conveyed it to NIH.

At a hearing held by Dingell in May 1989, Wyngaarden testified, "The new information you have shared with us on this case is extremely disturbing. During our reopened investigation, we shall reassess everything we know about this case in determining whether misconduct is involved." Wyngaarden also took sympathetic notice of the personal plight of O'Toole, who said that she had been unable to find a suitable job since setting off the controversy about the paper. "Clearly, Dr. O'Toole has taken considerable risk in bringing this case to the attention of officials at MIT and Tufts and insisting that the truth be learned," Wyngaarden told the hearing. "We are concerned," he added, "that Dr. O'Toole's scientific career has been damaged because she has pursued her convictions."

Praise for O'Toole Deleted

Dingell's hearing also brought out that the final draft of the NIH panel's report expressed praise for O'Toole. But when the published version appeared, those words were gone. Mystification about their deletion was expressed by the three-member panel and NIH officials.

Renewed at Wyngaarden's direction, the inquiry into the *Cell* paper retained the original three panel members, and took on two new ones when it got under way at the beginning of this year: Stewart Sell, University of Texas, and William McClure, Mellon Institute, Pittsburgh. One of its first steps was to hold a day-long session with Margot O'Toole. Meanwhile, the OSI staff has had consultations with Walter Stewart and Ned Feder, who had been detailed to work with Dingell's staff under an arrangement that Congressional Committees may use to obtain expertise from Executive Agencies.

(Stewart, who almost daily worked in Dingell's staff office for nearly two years, has recently returned to the NIH Bethesda campus, at the insistence of the parent Department of Health and Human Services. But he's still on call for the Dingell Subcommittee, and, in fact, has been assigned by Dingell to work on a new inquiry.)

Under OSI procedure, the draft report of the panel—"expected within a matter of weeks"—would be sent for comment to the main participants in the controversy. OSI staff would then adjust the draft as they consider appropriate, and forward it to the Director of NIH (Acting Director at present), who would issue the final report, recommendations, and if he chooses, comments. In the first round of the investigation, the interval between draft and final version was about two months.

The report of the second panel in the Baltimore case may not move as fast as that, but the end is not far off. Knowledgeable expectations are that the conclusions will not enhance the glory of science.

Meanwhile, Dingell is marking time, awaiting the outcome of the NIH inquiry. The superconfident, roughmannered Congressman lost the public-relations battle last year with Baltimore—a painful, unusual experience for him.—DSG

. . . "Emerging Universities Are Being Neglected"

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out of total federal R&D spending of $54 billion.

Ford was not merely unsympathetic to the proposed rule change, on which he held hearings June 21. He was overtly scornful, charging that the rule's proponents were seeking to reinforce a system that is rigged against aspiring universities and financially straitened states—like Kentucky. Adoption of the rule, Ford said, "could have a rather dramatic effect on those of us who are attempting to enhance the research and development potential in our home-state institutions."

The basic problem is that federal funds for laboratory construction and renovation have virtually disappeared from research-agency budgets, leaving schools without well-equipped buildings at a serious disadvantage in the quest for competitively awarded research funds. In response, appropriations items specifically written to benefit particular universities—"earmarks," as they're called—have flourished on Capitol Hill, setting up not only a classic conflict between haves and have-nots, but arousing the establishment's concern about the durability of scientific control over science spending.

Growth Sector for Lobbyists

Into the picture have come some of Washington's most skilled lobbyists, shrewdly not promising results, but pointing out that many institutions of higher learning have benefited greatly from having their own hired representatives working the mysterious back rooms of government.

Congress responded last year by giving NSF a $20-million startup fund for construction awards. But the sum, difficult as it was to obtain under deficit-cutting pressures, is minuscule in comparison to the claimed needs of many billions for neglected capital projects on university campuses.

In harmony with Senator Ted Stevens, of Alaska, the ranking Republican on the Rules Committee, Chairman Ford deplored what he described as neglect of the academic needy, while "the prestigious institutions get a lion's share of the funding." In making that accurate observation, he was voicing a grievance widespread among legislators from states that rank low in federal R&D awards. The distribution of the federal funds, Ford said, is dominated by a "good-old-boy attitude" and "emerging universities with great qualities are being excluded."

Stevens chimed in, stating that government policy is to "let federal dollars follow private dollars" in making R&D award decisions. A better policy, he contended, would be to "send federal money where private money won't go."

The ire of the Chairman and the senior Republican on the Committee was directed at a sponsor of the rule change, Senator John C. Danforth (R-Mo.), brother of William Danforth, Chancellor of Washington University, St. Louis (who was not present). Appearing as a witness, the Senatorial Danforth sought approval of Senate Resolution 206, which would permit a point of order to block non-competitive R&D awards—the so-called earmarks or pork-barrel grants—unless overridden by a hard-to-get three-fifths vote.

Rhetorically fencing with Ford and Stevens during 40 minutes in the witness chair, Danforth argued that scarce research funds should be dispensed on the basis of scientific judgments rather than political muscle and guile—which are the main ingredients of earmarks. The "pie should not be carved in a way that does not reflect the competence of the institutions," he said.

Asserting in a prepared statement that "Congressional earmarking of federal research funds is an insidious practice," Danforth said that it is nonetheless on the rise, and he recited what are generally regarded to be the most reliable numbers concerning earmarks. They are indeed one of

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House Bill Says U. of Alabama Should Get Share of SSC Work

With earmarking branded unclean by the upright elders of science, tip-toeing is the customary mode of locomotion on the political route to pork-barrel riches. But not always, as can be seen in the latest bill approved by the House Appropriations Subcommittee for Energy and Water Development, chaired by Rep. Tom Bevill (D-Ala.).

As Chairman of the Subcommittee, Bevill is a key figure in monetary affairs of the Superconducting Supercollider (SSC). He has been kind to the SSC, recommending approval of the crucial $169 million sought by the White House for construction next year, plus the additional funds requested for administration, design, and equipment.

But the appropriations report (101-536) states that Bevill wants a slice of the SSC wealth to go to the University of Alabama, several of whose campuses are not far outside the boundaries of his sprawling district.

"The Committee," states the Appropriations Report, "has been impressed by the comprehensive high-energy physics program at the University of Alabama. The University provides state-of-the-art research laboratory equipment in the science and engineering laboratories, an IBM3090 mainframe computer and access to the Alabama supercomputer. The Committee urges the Department of Energy and the Texas National Research Laboratory Commission to expand their SSC program at the University."

No sums for this objective are specified in the Appropriations bill. But, given Bevill's strategic grip on SSC money, it is safe to assume that the SSC program will expand as suggested.

. . . "No Win" Situation for Members, Danforth Says

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Congress's darker and least trackable procedures, though, as Danforth pointed out, the extent of earmarking is not precisely known. One reason is that the language of appropriations reports is often deliberately indecipherable. Another, not mentioned, is that the review processes for capital projects varies widely among federal research agencies. In reality, the establishment's ideal of peer-reviewed competition for facilities is not a standard practice, though when flagrant earmarks occur, champions of peer review contend that sacrosanct rules have been violated.

$270 Million in Earmarks This Year

In the current fiscal year, 1990 (which ends September 30), Danforth said, "Congress earmarked at least $270 million to specific colleges and universities for pet projects. The good news," he went on, "is that this is a slight decrease from the FY 1989 total of $289 million. But the 1989 total was 23 percent higher than the year before," Danforth stated, noting that in 1989, "nearly 17 percent of the total Department of Agriculture appropriation of $337.3 million for university research was earmarked, half of it for research and the other half for facilities construction. Similarly, 15 percent of the Department of Energy's university research budget of $489.9 million was earmarked. The research and development budget of the National Institute of Standards and Technology is only $159 million in Fiscal Year 1989, of which nearly 10 percent was earmarked."

The growth of earmarking, Danforth continued, "creates a no-win situation for Members, as well as for constituents. If Members do not earmark funds, they are accused of neglecting their constituents. If they do earmark, they are criticized by the press for serving parochial interests at the expense of the nation."

In 1986, Danforth said, the political lure of earmarks had reached the point where the Defense Appropriations bill contained three awards for universities that had not submitted applications for the funded projects. And four institutions awarded funds in the bill, he said, were deemed incompetent by Defense research agencies to carry out the projects.

Ford received that account with skepticism, responding that "76 percent of all DoD dollars go to the same 20 universities." The Kentucky Senator suggested that the absence of applications simply reflected realism about the worth of investing effort in the conventional competition process.

Explaining the mechanics of the proposed rule change, Danforth said that it "establishes a point of order against any legislation which earmarks civilian or defense research funds or research facilities construction or operations money. When the point of order is sustained," he continued, "the offending provision is automatically deleted and cannot be offered as a floor amendment. The point of order could only be overruled by a supermajority of the Senate"—a reference to the three-fifths hurdle.

After summarizing his prepared statement, Danforth skirmished with Ford and Stevens, telling the latter at one point that "on a per capita basis for competitive grants, Alaska is fourth in the United States."

The argument continued, with Ford insisting that universities seeking research funds on Capitol Hill were practicing their Constitutional right to petition the government. Danforth conceded that the less-affluent institutions deserved help in building up their research capabilities, but said funds should not come from research budgets or money intended for competitive awards for facilities. He did not suggest a source of funding.

Danforth pointed out that, along with the proposed rule change, he had introduced companion legislation for the General Accounting Office, the Congressional investigative service, to study the fairness of peer-reviewed awards. Senator Stevens said he had no confidence in such a study, since "the old-boy network will conduct the audit."

The Senator from Alaska later introduced a novel argument into the hearing. Noting that industrial expenditures for research are tax-deductible and, therefore, in effect government-subsidized, he asked Danforth whether peer review should be required in that sector of research. Looking puzzled, Danforth expressed concern about "big brother in research." He added, "That would be industrial policy in the extreme," a reference to the simmering political debate over Washington's proper role in fostering industrial research and high-tech industry.

Gore Sees Both Sides of Issue

With a vote on the Senate floor affecting attendance at the hearing, Senator Albert Gore (D-Tenn.) came late to the Rules Committee session. As befits a long-term Presidential aspirant, Gore judiciously navigated down the middle of the issue. Pointing out his experience with research issues as Chairman of the Commerce Subcommittee on Science, Technology, and Space, Gore expressed confidence that the "system works well, though it sometimes overlooks good proposals that should be funded."

Then, invoking one of the most shopworn quotations in public discourse, Gore said that Churchill's observation about democracy was applicable to peer review: "The worst system in the world, except for all others." Finally, he warned that "if we go down the road of earmarks, it would threaten the system." To which he added, "Where problems exist, let's fix them."

The exchanges went on for a time, with Danforth insisting that earmarks "rob competent institutions" and waste scarce resources. In direct response to Senator Ford's em-

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Tufts Head Says Earmarks Boosted His University

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phasis on the heavy federal support for a relative handful of institutions, Danforth said, "You're suggesting a quota system for research."

Looking at the clock, Danforth said he had to leave, and spoke his parting words: "I don't think I made any sales today."

Next at the witness table was an anti-earmark panel consisting of Erich Bloch, Director of the National Science Foundation; Joe B. Wyatt, Chancellor of Vanderbilt University; James D. Ebert, Vice President of the National Academy of Sciences, and George H. Shaw, a Union College (NY) Professor of Geology, representing the American Geophysical Union, which has adopted a resolution calling for bigger, but peer-reviewed, federal budgets for university buildings.

It Helps Rich Get Richer, Study Finds

Wyatt argued that earmarking, rather than helping financially neglected regions, has actually become the instrument of gain for the richer states. "The rich get richer," he said. "Help for the poor is a myth." Drawing on a study by James Savage of the University of California, Wyatt noted that more than $900 million was earmarked for 300 academic research and facility projects between 1980 and 1989. "More than 40 percent of earmarks went to just five states," Wyatt told the Committee, "while two-thirds of the projects went to only ten states. The top ten earmarking institutions," he continued, "received nearly 40 percent of all projects, while the top 20 schools received nearly 60 percent of all earmarked funds."

The argument that earmarking is a fraud on the poor didn't ring any bells with the Committee. At that point, all members but Senator Gore had left the hearing room, and he didn't show interest in Wyatt's contrary assessment of the economic realities of the academic pork barrel.

Gore asked whether there was validity to the complaint that some universities "are locked out of the system." Ebert responded that the main problem was inadequate financial support for research in the US.

In his turn, Bloch disputed the "old-boy" contention, stating that "75 percent of the advisory panel members [at NSF] are not from top schools." And he deplored earmarking as wasteful of precious research funds, stating that peer review "determines the best utilization for scarce resources. The pressure on leaders in both the Congressional and university environments are severe," the NSF Director added. "I am always dismayed, however, to see university officials circumvent the merit-review process and resort to asking their elected officials to earmark federal funds in one bill or another. It is a symptom of their focus on near-term results instead of long-term payoffs."

With the hearing down to only Senator Gore in attendance, and lunch long overdue, the pro-earmark case got brief attention. Scheduled to testify was Jean Mayer, President of Tufts University, which has successfully taken the earmark route to many millions, including a $34 million Human Nutrition Research Center on Aging, forcibly financed by the US Department of Agriculture. Mayer didn't attend the hearing, but in the prepared statement requested of all witnesses, he attacked the proposed anti-earmark rule.

"The underlying premises behind this resolution," he said, "are that (1) Members of Congress are not qualified to make decisions that pertain to scientific research, and (2) those receiving direct Congressional appropriations for building of research facilities are somehow guilty, *prima facie*, of conducting 'bad' research and therefore are undermining or diluting the quality of scientific research in this nation."

In his statement, Mayer praised Congress for its wisdom in staking his university. Funds for the Nutrition Center were appropriated by members of Congress, he said, "because they believed that as President of the University, my background in nutrition would ensure that the Center would be of the highest caliber and that the quality control of research would be assured at Tufts. Many of the best-known nutrition researchers at Harvard came with me to Tufts to form a superb nucleus for a great national resource. As a result," Mayer asserted, "the Center is the site of the most advanced research conducted today on human nutrition and aging in the world."

Mayer listed Tufts's other awards from Washington, including "money for an additional building at the Fletcher School of Law and Diplomacy" and "money appropriated for the School of Veterinary Medicine at Tufts." The latter, he said, "is one of the best in the country, and is now ranked fourth of 26 veterinary schools in terms of volume of research."

Mayer Assails Earmark Opponents

Mayer continued: "Those in the university community who oppose direct Congressional funding for research facilities are, on the whole, institutions who receive the lion's share of federal funds for research programs. They are able to walk away with more than half of what the government spends annually on university research because they will be conducting the research at state-of-the-art facilities that got their start years ago with government funds. But for more than 20 years, there has been no federal program for funding of research facilities on a peer-review basis. Hence," Mayer concluded, "direct Congressional funding has been the only avenue for many institutions."

Similarly hostile assessments of the anti-earmark drive were delivered by Wimberly C. Royster, Vice President for Research and Graduate Studies, University of Kentucky, and Michael M. Crow, Director of the Office of Science

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More In Print: *Office of Naval Research Reports from Europe and Asia; Waste Management Manual for Laboratory Personnel*

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officers with scientific or engineering backgrounds and civilian specialists, on research activities in Europe and the Middle East and in Japan and other parts of Asia:

European Science Notes Information Bulletin (about monthly), produced in the ONR London office, contains reports of visits to laboratories and administrative offices for research. The latest issue concentrates on the research aspects of Europe's 1992 economic amalgamation.

Order from: Office of Naval Research, European Office, attn: Writer-Editor, Box 39, FPO NY 09510-0700. In the UK: ONR, 223/231 Old Marylebone Rd., London;tel. (London): 44 71 409-4340.

Scientific Information Bulletin (quarterly), produced in Tokyo by ONR in collaboration with the US Air Force and Army Offices of Research Far East, focused on research in Japan, with some coverage of S&T elsewhere in Asia.

Order from: ONR Liaison Office, Far East, APO San Francisco 96503-0007. In Tokyo: ONR, Akasaka Press Center, 7-23-17, Roppongi, Minato-ku, Tokyo 106; tel. (Tokyo) 813-401-8924.

The Waste Management Manual for Laboratory Personnel (31 pp., no charge for single copies; up to 10 free to non-profit groups), by the American Chemical Society Department of Government Relations and Science Policy, lists federal regulations for storage, use, and disposal of laboratory materials; discusses training for safe handling procedures, labeling, transportation, etc. Included is a list of substances identified as hazardous by the Environmental Protection Agency and other authorities.

Order from: ACS, Department of Government Relations and Science Policy, 1155 16th St. NW, Washington, DC 20036 (include self-addressed label); tel. 202/872-4386.

Earmarked Awards

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Policy and Research, Iowa State University, Ames.

The same authority that brings Congress into decision-making on war, economics, and other matters of national importance, extends to the placement of university research facilities, Royster said in his prepared statement. Noting the local economic impact of thriving research facilities, he argued, "The purposes and relative priority of such projects have ramifications that go far beyond the realm of specific scientific expertise, and the academic community has neither the authority, responsibility, expertise, nor the national perspective necessary to make these decisions."

Crow, from Iowa State, another beneficiary of earmarks, conceded that "large-scale earmarking" could impair "national technology development efforts." But he opposed the Danforth rule as "an overly simplistic solution to a problem that merits more careful policy consideration by Congress."

Along with many others, he suggested that the basic solution is more money for research facilities. But the prospects for meaningful sums are extremely small. Meanwhile, the pork-barrel route remains heavily traveled. Some institutions that have not yet participated are contemplating the plunge.

As for earmark-killing Senate Resolution 206, the word from the Rules Committee is that after the July 4th recess, Chairman Ford and Ranking Republican Stevens will look it over. SGR was advised that the future of the resolution is not bright.—DSG

Job Changes & Appointments

Stephen A. Merrill has been appointed Director of the Office of Government and External Affairs at the National Academy of Sciences, succeeding ***Allan R. Hoffman***, who left the Academy staff at the end of May. Merrill had been head of the NAS Office of Government Affairs. In his new position, he will also direct the Academy-Industry Program, which stages seminars and other programs for some 70 industrial firms.

William G. Wells Jr. is serving as Chief of Staff to D. Allan Bromley, White House Science Adviser. Wells took the post on a 15-month leave from George Washington University, where he is Associate Professor of Management Sciences.

James S. Todd, a senior administrator at the American Medical Association since 1985, has been appointed Executive Vice President of the AMA, a post he's held on an acting basis since February. He succeeds ***James H. Sammons***, who has retired.

SGR Summer Schedule

The next issue of *Science & Government Report* will be published August 1, 1990.

In Print: *Federal Lab Facilities; Agricultural Tech Transfer; Undergraduate Science; Decade of the Brain; National Water Resources*

The publications listed are obtainable as indicated—not from SGR.

Federal Laboratory and Technology Resources: A Guide to Services, Facilities, and Expertise (Order No. PB90-104480; 211 pp. plus indexes, $62.95), 1990-91 edition, prepared by the Commerce Department's Center for the Utilization of Federal Technology as part of Washington's improving but still half-hearted efforts to reap more economic gain from the $25 billion a year spent in federal labs. The volume lists over 1100 federal research facilities, government- and contractor-operated, describes their major equipment and research programs and gives names, addresses, and telephone numbers for making inquiries about using equipment, research collaboration, etc. The listings are cross-indexed by scientific and technical field, state, and federal agency.

Order from: National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161; tel. (703) 487-4650.

Agricultural Research and Technology Transfer Policies for the 1990s (GPO Stock No. 052-003-01182-4; 50 pp., $2.50), by the Congressional Office of Technology Assessment (OTA), states that at least one-third of federal funding for agricultural research now comes from outside the US Department of Agriculture, raising concern "that the traditional agricultural research and extension system, if unchanged, may be bypassed by the broadening research base and emerging technologies." OTA indulges in the venerable Washington policy-options routine, offering three, of which the favorite is not hard to spot: (1) do nothing; (2) do a bit more than nothing, and (3) "Substantially increase the level of competitive grants research while continuing current levels of formula funding. . ." A notable sidelight is a frank discussion of the pros and cons of formula grants and competitive awards. The report is a spinoff from a major OTA study of agricultural technology and related issues, requested by the House and Senate Agriculture Committees, due later this year.

Order from: USGPO, Superintendent of Documents, Washington, DC 20402-9325; tel. 202/783-3238.

NSF's Research Experiences for Undergraduates Program (REU): An Assessment of the First Three Years (NSF 90-58; 20 pp., no charge), summary of a report on an NSF program, revived four years ago, for undergraduate participation in research with NSF grantees or enrollment in special summer programs designed to provide research experience. This is an attractive model as political pressure rises for a more assertive federal role in science education. From fiscal 1987 through 1989, about 11,000 students took part in the REU Program, at a cost to NSF of $38 million. The evaluation report, prepared by Abt Associates, Inc., a consulting firm, is extremely favorable. The programs, it reports, substantially boosted many students interest in further science studies and reinforced the intentions of students already committed to science.

Order summary from: NSF, Forms and Publications Unit, Room 232, 1800 G St. NW, Washington, DC 20550; tel. 202/357-7668.

The full report (219 pp., no charge) is available from: Abt Associates, Inc., Center for Science and Technology Policy Studies, 55 Wheeler St, Cambridge, Mass., attn. Stephen J. Fitzsimmons; tel. 617/492-7100.

Implementation Plan for the Decade of the Brain (44 pp., no charge), spells out in some detail the big program that's being organized at NIH in response to Congress last year declaring the 1990s the "Decade of the Brain," a convenient, if bizarre, label for expansion of research under the auspices of the National Institute of Neurological Disorders and Stroke (NINDS). The plan, prepared by a panel appointed by the Institute's Advisory Council, calls for $221 million in new money next year for NINDS, rising to $410 million in two years. Among the 14 categories listed: Alzheimer's disease, multiple sclerosis, brain tumors, epilepsy. At full throttle, the little-publicized "Decade" would be about double the size of NIH's much-debated Humane Genome Program. But directly linked as it is to deeply feared ailments, it's not likely to match the Genome in arousing resentment over resources. The Decade is also notable as a nice piece of collusive work involving NIH, Congress, and the disease lobbies—in the old style of NIH's great expansionist days. Congress is certainly willing, but whether the money can be wrested from the deficit-clamped budget is another matter. The *Implementation Plan* is marked "For Administrative Use Only," but somehow word of its existence has got around and orders will be filled when a new printing arrives.

Order from: NIH, National Institute of Neurological Disorders and Stroke, Bldg. 31, Room 8A-06, Bethesda, Md. 20892; tel. 301/496-5751.

National Water Summary 1987—Hydrologic Events and Water Supply and Use (553 pp., $31), fifth in a series by the US Geological Survey on the nation's water resources, this one includes the first nationwide data on withdrawals from river basins, aquifers, etc., plus use and disposition of water by major sectors of the economy. The volume includes detailed state and county maps showing sources of supply and uses.

Order from: USGS, Books and Open-File Reports Section, Federal Center, Bldg. 810, Box 25425, Denver, Colorado 80225-0425; tel. 303/236-7476. (Make checks payable to: US Department of the Interior—USGS.)

From the US Office of Naval Research (ONR), two peri- als (available without charge), written by military

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